Study Title:

A Phase 1, Randomized, Open-label, Single-center, Comparison of Heterologous Prime-Boost Vaccination Schedules of Tetravalent Dengue Virus Purified Inactivated Vaccine (PIV) and Tetravalent Dengue Virus Live Attenuated Vaccine (LAV) in Healthy Adults in a Nonendemic Region.

Background:

This study involves 2 experimental dengue vaccines. Dengue is a common infection affecting residents and travelers to many areas of the world, including Southeast Asia, Central America, South America, and the Caribbean. It is caused by a virus and is transmitted by a mosquito. Dengue can cause fever, tiredness, and even severe bleeding or death. It can pose a threat to military operations; therefore, the military is trying to develop a vaccine to protect against dengue.

This study will look at the effects of combining 2 experimental dengue vaccines. This is neither the first time these dengue vaccines have been used in humans nor the first time that they have been used together. It will take place at a clinic-style research facility in Silver Spring, Maryland, and is sponsored by The Surgeon General, Department of the Army. The vaccines will be given in your upper arm using a needle, and blood samples will be collected to look at your body's response. The goals of this study are to determine if the vaccines are safe when used together and to see how your body responds to the vaccines. One of the vaccines is a live-attenuated, or weakened, vaccine, just like the chickenpox or measles vaccines. The other is an inactivated or killed vaccine, like the flu vaccine or polio vaccine.

Duration:

This study will last 18 months.

One or two clinic visits are required to see if you qualify for the study. If you are accepted into the study, you will receive 1 dose of each of the vaccines. All study subjects will get the killed vaccine first followed by the live vaccine. After each injection, there will be follow-up visits. These visits will continue for 12 months following the last vaccination in each group. There will be a total of **14** scheduled clinic visits (not including the initial screening).

Requirements and Restrictions:

You must meet ALL of the following requirements in order to participate in this study:

- You MUST be **18** to **42** years of age (at the time of initial screening).
- You MUST be in good health and have no significant medical conditions or diseases.
- You CANNOT be pregnant, breastfeeding or planning to become pregnant during the study. For safety reasons, you must ALSO be willing to use a reliable form of birth control during the study. The effects of these vaccines have not yet been studied in infants or unborn children.
- You must have NEGATIVE blood tests for hepatitis B, hepatitis C and HIV.
- You CANNOT have ever had a dengue infection or received a dengue vaccine.
- You MUST have a valid state or US government issued photo ID (such as a driver's license, military ID or US Passport).
- You MUST be willing to attend all of the required visits over the next 18 months.

- You MUST be willing to refrain from participation in any other clinical studies involving investigational drugs or vaccines while participating in this study.
- You CANNOT have donated or received blood, blood products, or plasma within 90 days prior to starting the study or plan on donating blood or plasma during the study.

There may be other reasons why you cannot participate in this study. Those will be discussed at your initial screening visit.

Possible Risks:

There are risks associated with receiving these vaccines.

Based on experience with these and similar vaccines, mild reactions are expected to occur in some subjects. These generally include tenderness, redness, and mild swelling at the injection site. These reactions will most likely resolve on their own within a few days. You may also experience other reactions, such as headache, nausea, a low fever, rash, or mild flu-like symptoms. There may be some risks that are unknown. There is always a chance that someone may experience a severe allergic reaction, just as some people do to other vaccines or drugs, like penicillin. After each vaccination you will be observed in the clinic for a short period of time to make sure you do not have an allergic reaction, or to treat you immediately if you do.

After each vaccination you will see a physician in the clinic who will evaluate the number and type of reactions you may have.

Compensation:

You will be paid for your participation in this study. Please refer to the study schedule or contact one of our recruiters for more detailed compensation information.

Can I schedule an appointment for you to be seen by the research staff so that you can hear more about volunteering for this study?

For more information on this study or to schedule a screening appointment, please call or email the WRAIR Clinical Trials Center using the contact information below and provide the following information to the staff:

- ✓ Name (first, MI, last)
- ✓ Date of birth
- ✓ Gender – M or F
- ✓ Phone number(s)
- ✓ Email address
- ✓ How you heard about this study

The above information will be entered into our secure database and will NOT be shared with outside sources.

WRAIR Clinical Trials Center
503 Robert Grant Ave, Silver Spring, MD 20910
Hours: Monday-Friday, 6:00am-2:30pm
Phone: 1-866-4-CTC-STUDY (866-428-2788)
Website: www.clinicaltrials.army.mil